Statement of
Los Angeles Mayor Eric Garcetti
Before the
Senate Committee on Environment and Public Works
Hearing on "Building Back Better: Addressing Climate Change in the Electricity Sector and Fostering Economic Growth"
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Introduction

Chair Carper, Ranking Member Capito, and Members of the Committee — my name is Eric Garcetti, and I serve as Mayor of Los Angeles, the second-largest city in the country; home to four million residents and the largest municipally-owned electric and water utility in the country. The Los Angeles Department of Water and Power, which I oversee alongside my City Council colleagues, serves a portfolio of one and a half million families and businesses, with energy demand equal to the size and scope of the entire state of Colorado.

I am honored to appear before you and this Committee on behalf of my city to discuss our clean energy transformation, a monumental undertaking happening as we power the biggest port complex in the Western Hemisphere, the country's busiest origin and destination airport, the largest sports and entertainment venues in the United States, and significant industrial and residential needs. And while these are some of the features that make Los Angeles unique, it is our diversity in the built environment, in geographic features, in population, and in climate change impacts that uniquely positions us to offer a clear model and story for the nation's shift to cleaner, greener, more resilient energy.

Mayors and local leaders live where we work. We see the impact of our policies and our actions in our own neighborhoods every day. We experience the heatwaves and wildfires that threaten our electric infrastructure, and we breathe the air that is either polluted or cleaned by the energy choices we make. We know the remarkable leaders incubating clean tech companies, working as solar and battery installers, seeing their bills eased by the energy efficiency programs we design — because they're not only our constituents, but our neighbors, our colleagues, our fellow parents at our kids' schools, our friends.

In my city, we tapped into that spirit of innovation — that urgency to lead the change on climate action and infrastructure development — back in 2019, when we released L.A.'s Green New Deal, a global model for what local action looks like to uphold the Paris Agreement. Our vision is designed to answer two fundamental questions: will our planet survive and sustain us, and will there be a place for me and my family in the economy of the future?

Our strategy comes down to what we call the Five Zeros, goals that could form the building blocks for your Build Back Better Agenda: A Zero Carbon Grid, Zero Carbon Buildings, Zero Carbon Transportation, Zero Waste, and Zero Wasted Water.

L.A. has committed to reaching 55% renewable energy by 2025, 80% by 2036, and 100% no later than 2045. And we will meet President Biden's goal of a carbon-free grid by 2035.

We have committed our utility to accelerate our energy transformation, and revisit our targets and timelines regularly.

When it comes to protecting public health, a Zero Carbon Grid is foundational. It is achievable. It is necessary, as a source of cleaner air, economic competitiveness, and long-term resilience.

It ensures that we are powering our cars and our buildings with the sun and the wind.

It allows us to address the largest source of greenhouse gas emissions in Los Angeles — our buildings — with about an even split between electricity demand and natural gas use mainly for heating and cooking. And it gives us another tool to tackle our transportation sector, our largest source of air pollution, which disproportionately affects our Black and Brown communities living closest to freeways and the Port. These are the same communities we see dying in the highest proportion from COVID-19.

To electrify the majority of these sources, we anticipate a doubling of electric demand compared to today.

To some, this is a daunting task.

To me, this is a moment to seize.

This is a massive opportunity to not just create jobs but to launch careers; to propel an innovation agenda that keeps America at the forefront of the global economy at a time we risk falling behind; to save lives, many of them the same people hit hardest by the COVID-19 pandemic and economic fallout.

This work is essential to the green and just recovery that I called for alongside hundreds of fellow Climate Mayors in a letter to Congressional leaders last year. Climate Mayors is a network I co-founded in 2014, comprised of nearly 500 American Mayors from 48 states, Democrats and Republicans, committed to upholding the goals of the Paris Agreement. Mayor Sylvester Turner is now the chair and his city of Houston represents another city at the tip of the spear — for climate impacts year over year, and for a true energy transition as the largest municipal user of renewable energy in the country, running on 100% renewable energy. They are doing this because renewables save them money.

This is also a global priority as outlined by the C40 Cities Climate Leadership Group Global Mayors COVID-19 Recovery Task Force. I was elected chair of C40 in 2019, an organization of 97 mayors from every region of the world representing a quarter of the world's GDP. And I established this task force of global mayors to develop an international agenda for a green and just recovery.

Thank you for shining a light on this pivotal moment for our nation and the world. We must grab hold of this chance to reimagine the backbone of one the most important human rights — access to power — to deliver resilience, economic opportunity, racial and environmental justice, and a climate safe planet.

First, allow me to share the L.A. story with you and then offer some lessons learned, recommendations, and appeals for partnership from me to you.

Snapshot of Los Angeles Power System

Not only is the Los Angeles Department of Water and Power the largest municipally-owned electric and water utility in the country, but it is also vertically integrated. That means that when the second largest city in the country says it is going to be powered by 100% renewable energy, we are not buying it off the market. We are building, generating, and delivering the power to our population of 4 million ourselves. We are building and maintaining over 15,000 miles of transmission and distribution infrastructure, and operating the grid ourselves.

That means we are balancing supply and demand 24/7 and leading the innovation that keeps the lights on with new forms of energy and energy management. That means, if the lights go out, we cannot point fingers, and that means that when we put forward needs and recommendations to the state and federal government for funding, technology development, workforce development, and more, we are doing so in direct service to not only our customers, but to my constituents.

Today, the Department of Water and Power, or LADWP, is already operating at 38% renewable energy and is nearly 52% carbon free. That is far ahead of the state's target of 33% renewable energy by 2020, which represents the most aggressive targets in the country. We have been the #1 solar city in America for six of the last seven years with enough locally installed solar to power 250,000 households.

We maintain a clean, affordable, and reliable grid through portfolio diversity, both in location and fuel type.

A significant portion of our energy production occurs out-of-basin — which means outside the city boundaries. This enables us to tap into many different renewable resources across the Western U.S., so that when the sun isn't shining in our local deserts, we can leverage large hydro power from the Pacific Northwest, or wind power from Wyoming or New Mexico, or vice versa, keeping fuel costs and emissions low on a daily basis.

We have expanded our renewable portfolio by reviewing and selecting projects on a least cost, best fit model. Most of our wind and solar projects are operating at prices competitive with fossil fuels. In 2020 alone, we signed contracts to add an additional 13% renewable energy to our portfolio through a combination of solar, battery, and wind. The Red Cloud Wind Farm located in New Mexico will be online by the end of this year and will deliver enough clean energy to power 222,300 homes in Los Angeles. The Eland Solar and Storage Center in Kern County — one of the largest solar and battery energy storage systems in the U.S. — will deliver enough power for 283,330 homes day and night across Los Angeles by the end of 2023.

And we share a stake in the Utah Intermountain Power Plant, the last of coal in our portfolio. This plant is being converted to a clean energy hub, with an ever-decreasing share of natural gas and rising share of wind, solar, and green hydrogen combustion at a site unique for its adjacent salt caverns, an unparalleled asset for long-term energy storage.

These resources are delivered to Los Angeles through 4,223 miles of transmission lines running on over 15,000 transmission towers, and connecting to the intricate sub-transmission and distribution system inside the city.

This infrastructure directly supports 11,000 LADWP and thousands more family sustaining jobs.

This commitment to power supply diversity is also reflected in our in-basin generation resources.

Today, our local generation includes four natural-gas power plants. In 2019, I announced that we would not be repowering as originally planned the in-basin natural gas power units that use ocean cooling on our coast. Instead, we will work to identify clean energy alternatives that bring more equity to our pollution-burdened communities in L.A. I will tell you more about that groundbreaking work shortly.

In addition to traditional combustion power generation, we have continuously worked to make Los Angeles a test bed for clean-tech solutions, from renewables and storage, to demand response, to energy efficiency.

My local sustainability plan set a goal of deploying 1,000 MW of local solar, 500 MW of demand response, doubling energy efficiency, and more than 28,000 vehicle chargers by 2030.

We have invested over $336 million in the Solar Incentive Program since 1999, having conducted 34,573 installations.

And we continue to innovate on new local, distributed solar programs, such as the city's Feed-in Tariff program, which pays solar developers a fixed favorable rate for the solar they deliver to the grid and which is now expanding to include a battery storage component, or the Shared Solar program which, by subscribing at a fixed rate, brings solar to tenant and multifamily buildings who may not have access to on-site solar. This protects a portion of a customer's electric bill against fluctuating utility costs for up to 10 years of subscription. Shared solar electricity is supplied by new solar power plants constructed in or near the L.A. basin. LADWP will even rent a homeowner's roof through a new Solar Rooftops program and pay that customer a fee for being able to build more local solar that provides system benefitting, clean electricity to the grid. Maintaining, and indeed expanding, local, distributed energy is foundational to our energy transformation. It supports local reliability, saves the utility money in supporting strategic locations on the grid, and delivers clean air, local jobs, and cost savings to communities.

The cleanest kilowatt of power is the one that is never generated. As we transition to a 100% clean power grid, we have invested heavily in energy efficiency programs and projects.

Energy efficiency is an investment that compounds dividends. A one-time rebate to replace a lightbulb, change out a fridge, or put in an electric heat pump generates savings the first year the project is done, and it keeps saving throughout the life of the equipment. Since the beginning of my term, we've saved customers over $1.5 billion dollars on their bills by investing in energy efficiency.

LADWP offers an extensive list of energy efficiency and water conservation programs for a variety of residential and commercial customers ranging from low-income, renters, landlords, owners, to small and large businesses.

In fiscal year 19-20, LADWP expended $194 million for energy efficiency programs. These investments yield over 350 Gigawatt hours of savings annually, and achieve roughly $56 million in bill savings for customers, and will continue year after year for the life of the measures.

For reference, saving 350 Gigawatt hours is the equivalent of taking 53,000 cars off the road for a year in terms of greenhouse gas emissions saved. The programs receiving the highest investment are Commercial Direct Install ($47 million), LAUSD Direct Install ($30 million), Consumer Rebate Program ($28 million), Commercial Lighting Incentive Program ($18 million), and AC Optimization ($12 million).

It is through this work that L.A earned the honor of being the #1 ENERGY STAR city in the nation in 2020, with 546 certified buildings saving about $200 million in energy costs annually. L.A has held this top spot four of the last eight years, and came in second place the other four years.

And the story would not be complete without taking a moment to discuss electric transportation - another extremely exciting and dynamic sector in Southern California.

Three electric bus companies are located in the L.A. region and L.A.'s local bus system will be completely zero emission by the time of the Olympic and Paralympic Games in 2028, with our Metro wide transit system with its 2,400 buses following right behind us.

We have invested nearly $35 million directly in deploying EV charging in the city and LADWP has provided $42.7 million in incentives for charging companies to build out their commercial systems in L.A. and $1.8 million for residential chargers.

We have some of the most generous incentives in the country which enabled us to meet our goal of 10,000 commercial chargers by 2021 two years ahead of schedule, focusing the buildout for workplace charging, multifamily buildings, and disadvantaged communities.

LADWP also provides a rebate of $1500 to customers who buy a used electric vehicle, and our Department of Transportation runs a low-income electric vehicle car sharing program — BlueLA — giving us another way for the average American to get into an EV.

We also have embarked on a bold program at the Port of Los Angeles to transition the 10,000 diesel trucks that operate there to all zero emission trucks by 2035. And recently Governor Newsom ordered the same for all ports in the state.

Electrifying buildings and transportation represents a doubling of the load we serve today and thankfully our complex grid has all the right characteristics for strong reliability and resilience.

This in-and out-of basin network, diversity of large and small, and strong transmission and distribution backbone have given us one of the best reliability records in the state and indeed the country, as well as very competitive rates.

But we are not immune to climate change, in fact far from it, and I will share with you two catastrophic climate events that lay bare our vulnerabilities and need to plan and prepare.

First, over the fourth of July weekend of 2018, Los Angeles experienced record breaking heat. While heat waves may not be unique to our region, they are becoming more frequent and intense. In fact, the seven hottest years in 140 years of record keeping were the last seven. From 1976-2005, the average annual temperature was 75 degrees F. That temperature is expected to rise 2.5 degrees F by 2039, an additional 3 degrees by 2069, and another 3 degrees by 2100, as conservative estimates. The number of high heat days in Los Angeles, measured as days above 95 degrees is expected to triple by mid-century, and will be even more intense in inland areas.

On July 6, 2018, temperatures skyrocketed, and brought some of our infrastructure past the brink. We are used to seeing days over 100 degrees in the Valley, but we hit 117 degrees. And what was most surprising and atypical, and a sign of the unpredictability of climate change, is that the downtown area hit 108. Cables melted, neighborhood distributing stations overloaded, and some neighborhoods lacked power for upwards of three days. The takeaway here is that the significant amount of work LADWP had been doing to maintain and upgrade infrastructure in the high heat zones of the San Fernando Valley paid off. It was those areas that hadn't been upgraded to withstand extreme heat -- areas that we just didn't expect to get that hot -- that were most affected. This was not a problem of lack of power availability. This was a problem of infrastructure coping with climate change. We have to do so much more, and not use history as our guide. Climate change has thrown out the old play book.

My second example is the Saddleridge fire sparked on October 10, 2019, which burned 8,800 acres and required LADWP crews to replace 40 poles, 4,000 feet of overhead and 150 feet of underground conductors. That fire intersected three major transmission corridors bringing power into the L.A. Basin from the Pacific Northwest, Kern County and through Victorville which reduced our imported supply by 75%, including nearly a thousand megawatts of renewables. Thankfully that day was not a high load day and we were able to keep the lights on, but we came within 135 megawatts of rolling blackouts. For perspective, the total load for that day was 3,331 MW, so it shows you how slim a margin under which we were able to operate. Here we learn the value of local generation inside the city, including the contribution of every solar panel on Angelenos' roofs.

As much as fire and heat has exposed our vulnerabilities in Los Angeles, we all saw the impacts of extreme cold on Texas infrastructure. What we learned there is that fossil fuel infrastructure is not immune, and in fact far from it according to experts and state authorities. These shifts in weather are becoming far too frequent to consider them outliers, and we are risking people's lives if we don't treat climate change as the national emergency it is. Battling climate change once felt intangible and even esoteric -- it is now more clear than ever that it is here and it demands urgent action.

Planning for a Reliable, Resilient, 100% Renewable Energy Future

It is built into our DNA in Los Angeles to undertake data driven and community-based investment planning to deliver our core City services. And electricity is no different.

We have regular intervals of strategic long-term resource planning, where, in my term as Mayor, we have increased our renewables ambition each time, demonstrating how quickly technology is moving.

And three years ago, Los Angeles formalized a partnership with the National Renewable Energy Laboratory, one of the DOE premier national labs, in Golden, Colorado. The partnership aimed to develop the most comprehensive, detailed analysis and roadmap for an entirely renewable-based power system as complex as L.A.'s, including modeling reliability under millions of simulations to evaluate multiple scenarios and climate impacts. Together we established a formal Advisory Group made up of a wide range of stakeholders, from environmental and environmental justice advocates, to local neighborhood and business representatives, ratepayer advocates, and policy and clean energy experts.

Let me cut to the chase: **Reliable, 100% renewable energy is achievable.**

In fact, our system can be **even more reliable than today** under the scenarios modeled.

And **coupling it with electrification of other sectors helps lower costs and increase the air quality and health benefits.**

We need it all and we need to start now: we need significantly more utility-scale renewables, microgrids and distributed resources like rooftop solar and batteries, energy efficiency, demand response, and innovation to expand the options and availability for renewable long-duration peaking capacity like green hydrogen.

In doing so, every analysis shows that we create jobs and save lives.

Takeaways and Next Steps

The LA100 process, aside from being a model municipal-federal partnership, has reinforced the importance of setting a goal, and undertaking comprehensive planning as well as an intentionally-designed decision making process with a diversity of stakeholders involved.

The study's findings are consistent across all scenarios, and emphasize that cities and utilities across the nation can get started now with no-regrets options such as adding new wind, solar, batteries, and transmission, deployed in any available location, and coupled with smart-grid operational practices that make more efficient use of these investments- while they work through longer-term, location-specific options for the final 10%–20% of the solution.

LADWP plans to invest well over $10 billion in clean energy infrastructure over the next 10 years. These are necessary investments to build resilience into the system where it is vulnerable to climate change impacts, like fire and heat, and to achieve the public health and economic benefits we all deserve.

In the short-term, LADWP will expedite upgrades to our transmission system. In the L.A. Basin alone, LADWP has over 120 miles of transmission work to complete over the next 10 years. Siting and permitting of transmission will need regulatory streamlining. In the past it has taken the Department 12 years to complete a mere 12-mile project due to regulatory hurdles. To do ten times that in 10 years, we need to be creative together to achieve a Zero Carbon Grid.

And we can put people to work now to expand the grid's capacity to support the decarbonization of our transportation and building sectors, Port electrification, LAX modernization, and resiliency projects like recycling 100% of our wastewater to augment our local drinking water supply. This work truly is the backbone of L.A.'s Green New Deal.

Recommendations to Congress

This brings me to my recommendations to this committee. Some of these can also be found in the Accelerator for America Infrastructure Playbook.

The first will come as no surprise: we need more funding.

This is at the heart of the President's Build Back Better platform — to launch national programs focused on grid modernization, hardening the grid against climate impacts, interstate EV charging buildout, and funding for local expansion of charging and distributed energy resources.

Increased funding to upgrade the grid to support distributed solar, storage and electric vehicle installations is a continued need, as well as funding for the technologies themselves.

For example, we plan to increase rooftop solar and storage on city facilities and carports in our parking lots. These are small but mighty projects that deliver resilience at scale while providing meaningful work for our local labor force. Similarly, programs that support EV charger installations in multi-family buildings and workplaces will enable us to accelerate our efforts.

A national green bank like the one proposed by Senator Markey or federal support for state and local bond issuance and refinancing could be effective ways to scale these investments, and overcome the challenge cities have of not being able to monetize tax credits.

The federal government should increase the current EV tax credit to $10,000 for vehicles priced at $60,000 or less and remove the cap on sales. Further, new monetary incentives should be offered to car owners who trade in gas-powered cars for EVs.

Much of these investments can be offset by eliminating all fossil fuel subsidies.

My second recommendation is streamlining.

In order to meet the urgency of climate change, we must streamline permitting processes through laser focused agency coordination and accelerated environmental review without compromising environmental stewardship and community participation.

Transmission projects that connect renewables across state lines benefit multiple communities — like our work with the Navajo Nation to transform a coal plant site into clean energy and stable jobs. We need to do everything we can to prevent delay.

My third recommendation centers on workforce development.

We should focus our efforts on creating a national training center for infrastructure, like that of the National Transit Institute, to set clear national objectives and establish a comprehensive strategy by providing resources, thought leadership, and training standards.

Further, a national training center for infrastructure should support programs that will provide minority and low-income communities with quality education and training to excel in emerging industries, like the cleantech sector and electric transportation, where access to training and education for charging infrastructure engineering, battery manufacturing, and electric vehicle maintenance is limited.

And we must finally remove barriers for targeted local hire on federally funded projects. It is vital that historically underrepresented groups have the opportunity to participate in the national transformation of our electric grid and infrastructure.

Locally, in my role as Chair of the L.A. County's Metropolitan Transportation Authority (Metro), I recently celebrated the groundbreaking of SEED LA, a college-prep, public boarding school that will provide pathways in the global transportation industry. By serving youth who meet low-income requirements, live in underserved areas, have experienced homelessness, or are engaged by the County child welfare system, SEED LA will provide youth with the skills they need to hold various jobs in the transportation industry and will teach transferrable STEAM (Science, Technology, Engineering, Arts, Math) industry skills.

And LADWP, in partnership with IBEW Local 18, developed the Utility Pre-Craft Trainee (UPCT) Program. Launched in 2011, the UPCT program leads to permanent civil service jobs for people living in low-income and underserved communities of Los Angeles. UPCT trains skilled workers for long-term positions including steam plant assistants, electrical mechanics and water utility workers.

We need to expand these training opportunities now to ensure we have a workforce ready and able to lead this transformation.

That brings me to my fourth recommendation, which is advancing equity.

In 2016, LADWP established the first of its kind *equity metrics* to track, measure, and report how its programs are benefiting customers, particularly our most vulnerable. This type of approach to measure success through the lens of equity could help inform federal programs and ensure success of the President's Justice40 directive.

We must reduce low-income families' energy burden and ensure they have access to clean and healthy buildings.

There are effective federal weatherization programs that could be expanded to support fossil fuel free appliances.

At the same time, we should expect affordable housing to meet the highest efficiency standards and include an efficiency metric for the low income housing tax credit.

On the transportation side, increased funding for the Low-No and DERA Programs are key for reducing the burden of poor air quality on low-income communities by electrifying bus fleets and freight.

Next, cities need technical assistance.

Programs like SolSmart have helped cities improve processes to attract local solar in their communities, and they could be expanded and replicated for EV charger installations and building decarbonization.

I talk to Mayors all the time who are just getting started. The more Congress can do to get direct, on-the-ground support out into American cities, the faster they're going to be able to complete projects and cut carbon emissions.

And finally, support technology RD&D.

Long duration, renewably derived fuels should be core to America's innovation agenda, as well as batteries and other forms of energy storage.

The NREL LA100 study shows a clear need for continued technology research in the area of green hydrogen and similar renewable fuels. These will play a key role in getting to that last 10-20% of our renewable grid, and we are 100% committed to getting there.

Los Angeles is leading the country in pursuing green hydrogen, with plans to run the Intermountain Power Plant in Utah with at least one-third green hydrogen when it comes online in 2025.

We are looking at green hydrogen options in-basin as well but face many unknowns about cost and technology availability, as well as what other options we should be considering.

We also need improvements in battery technology so they can run longer and take up less space whether sitting at a power facility, inside a truck, or inside your home.

Because, as I mentioned earlier, when advanced holistically, a zero carbon grid, zero carbon transportation, and zero carbon buildings leverage each other to maximize equity, health, and economic benefits, and reduce costs system-wide and at the customer level.

We have learned a tremendous amount from the LA100 study and believe it is an example for jurisdictions across the country to inform their clean energy implementation pathways and infrastructure investments. You have the ability to scale this approach, to demand this level of planning and ambition from our utilities. I will continue to encourage my colleagues across the country to embrace such an approach, and encourage Congress to consider its significance in regard to the President's climate goals.

Conclusion

As I stated at the outset, a zero carbon grid is foundational to decarbonizing the economy overall. It is fundamental to a green and just recovery from COVID-19 as well, because it represents a remarkable nationwide infrastructure program — to build the clean energy resources; upgrade and install new poles and wires; and incorporate electric vehicle charging infrastructure within a well supported and resilient grid. It will bolster the trades, boost manufacturing, and stimulate incredible fields of science. All of these lift up communities, and that's our first priority.

Thank you once again, Chair Carper and Ranking Member Capito, for allowing me to be here today. I look forward to partnering with you to power America with 100% renewable energy. America's cities are ready to lead alongside you.